

H.R. 3916, AS AMENDED BY THE SUBCOMMITTEE
ON TECHNOLOGY AND INNOVATION
ON FEBRUARY 7, 2008

1 **SECTION 1. ENSURING RESEARCH ACTIVITIES OF THE DE-**
2 **PARTMENT OF HOMELAND SECURITY IN-**
3 **CLUDE APPROPRIATE CONCEPTS OF OPER-**
4 **ATION.**

5 The Under Secretary for Science and Technology of
6 the Department of Homeland Security (in this Act re-
7 ferred to as the “Under Secretary”) shall ensure that any
8 Federal Government interagency or intra-agency agree-
9 ment to develop and transition new technology explicitly
10 characterizes the requirements, expected use, and concept
11 of operations for that technology, including—

- 12 (1) the manpower needed to effectively operate
13 the technology;
14 (2) the expected training requirements; and
15 (3) the expected operations and maintenance
16 costs.

1 **SEC. 2. REAUTHORIZATION OF HOMELAND SECURITY**
2 **SCIENCE AND TECHNOLOGY ADVISORY COM-**
3 **MITTEE.**

4 Section 311(j) of the Homeland Security Act of 2002
5 (6 U.S.C. 191(j)) is amended by striking “on December
6 31, 2008” and inserting “on December 31, 2012”.

7 **SEC. 3. REPORT ON BASIC RESEARCH NEEDS FOR BORDER/**
8 **MARITIME SECURITY.**

9 Not later than 3 months after the date of enactment
10 of this Act, the Under Secretary shall enter into an ar-
11 rangement with the National Research Council for an as-
12 sessment of the basic science research needs in the border
13 and maritime security domain. The assessment shall in-
14 clude consideration of—

- 15 (1) detection, tracking, and identification tech-
16 nologies;
17 (2) personal protective equipment;
18 (3) anticounterfeit technologies; and
19 (4) advanced screening technologies at ports of
20 entry.

21 **SEC. 4. INCORPORATING UNMANNED AERIAL VEHICLES**
22 **INTO BORDER/MARITIME AIRSPACE.**

23 (a) RESEARCH AND DEVELOPMENT.—The Secretary
24 of Homeland Security and the Director of the Joint Plan-
25 ning and Development Office shall research and develop
26 technologies to permit routine operation of unmanned aer-

1 ial vehicles within the national airspace for border and
2 maritime security missions without any degradation of ex-
3 isting levels of safety for all national airspace system
4 users.

5 (b) PILOT PROJECTS.—The Secretary shall coordi-
6 nate with the Administrator of the Federal Aviation Ad-
7 ministration to enter into pilot projects in sparsely popu-
8 lated, low-density Class G air traffic airspace to conduct
9 experiments and collect data in order to accelerate the safe
10 integration of unmanned aircraft systems into the national
11 airspace system.

12 **SEC. 5. ESTABLISHING A RESEARCH PROGRAM IN TUNNEL**
13 **DETECTION.**

14 (a) RESEARCH AND DEVELOPMENT.—The Under
15 Secretary shall research and develop technologies to per-
16 mit detection of near surface voids, such as tunnels, with
17 an emphasis on technologies with real time capability.

18 (b) COORDINATION.—The Secretary of Homeland Se-
19 curity shall coordinate with other appropriate Federal
20 agencies, including the Department of Defense, and en-
21 sure the integration of activities under subsection (a) with
22 relevant efforts of such other agencies and the Depart-
23 ment of Homeland Security's Centers of Excellence Pro-
24 gram.

1 **SEC. 6. RESEARCH IN ANTICOUNTERFEIT TECHNOLOGIES.**

2 (a) ESTABLISHMENT OF PROGRAM.—The Under Sec-
3 retary and the Director of the National Institute of Stand-
4 ards and Technology shall establish a joint research and
5 development program on anticounterfeit technologies and
6 standards. The program may include development of coun-
7 terfeit-resistant documentation, counterfeit-resistant de-
8 vices, document validation technologies, and document
9 identification standards.

10 (b) COORDINATION.—In carrying out the program in
11 subsection (a), the Under Secretary or his designee shall
12 coordinate with other Federal agencies engaged in similar
13 activities, including Immigration and Customs Enforce-
14 ment, the Department of State, the Department of De-
15 fense, and the Department of Justice.

16 (c) REPORT TO CONGRESS.—Not later than 12
17 months after the date of enactment of this Act, the Under
18 Secretary and the Director of the National Institute of
19 Standards and Technology shall provide to the Committee
20 on Homeland Security and the Committee on Science and
21 Technology of the House of Representatives, and the Com-
22 mittee on Homeland Security and Government Affairs of
23 the Senate, a report detailing the actions taken by the
24 Under Secretary and the Director under this section.

1 **SEC. 7. STUDY ON GLOBAL POSITIONING SYSTEM TECH-**
2 **NOLOGIES.**

3 (a) IN GENERAL.—The Under Secretary shall con-
4 duct a study of the need for next generation global posi-
5 tioning system technology as it relates to border security,
6 including—

7 (1) conducting an analysis of the frequency of
8 unintended border crossings and the capability of
9 global positioning system technologies to address un-
10 intended border crossings by government personnel;

11 (2) undertaking an examination of the potential
12 end user requirements for global positioning system
13 technologies, including cost limitations, accessibility,
14 and reliability; and

15 (3) developing recommendations for potential
16 near-term and long-term research, development, test-
17 ing, and evaluation of border security-focused global
18 positioning technologies.

19 (b) CONSULTATION.—In conducting the study under
20 subsection (a), the Under Secretary shall consult with
21 U.S. Customs and Border Protection, the National Insti-
22 tute of Standards and Technology, the United States Geo-
23 logical Survey, and appropriate Federal, State, and local
24 law enforcement officials.

25 (c) REPORT.— Not later than 1 year after the date
26 of enactment of this Act, the Under Secretary shall trans-

- 1 mit to Congress a report on the findings of the study con-
- 2 ducted under this section.